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EXAMINER

HUSON, MONICA ANNE

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/964,838

Applicant(s)

NILSSON ET AL.

Examiner

Monica A. Huson

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 26-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 26-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the Amendment filed 23 May 2006.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 32 are rejected under 35 USC 103(a) as being unpatentable over Scher et al. (U.S. Patent 4,092,198), in view of Schmooch (U.S. Patent 5,344,692). Regarding Claim 1, Scher et al., hereafter "Scher," show that it is known to carry out a method for the manufacture of a decorative surface element, which element comprises a base layer, a décor layer of a lacquer, and a wear layer (Abstract), the process comprising the steps positioning one or more structured rollers or molds on top of the lacquer, the one or more rollers or molds provided with embossing rollers (Column 5, lines 3-13; Column 6, lines 50-64), pressing said one or more rollers or molds into said lacquer, whereby the lacquer will be provided with a surface structure, thereby enhancing the decorative effect of the décor (Column 6, lines 50-64; Column 7, lines 36-68), and thereafter curing the wear layer (Column 10, lines 6-18). Scher does not show using a UV curable resin in his decorative surface element. Schmooch shows that it is known to carry out a method for making a decorative surface element using a layer of UV curing lacquer that is cured by applying a UV beam (Column 4, lines 11-13). Schmooch and Scher are combinable because they are concerned with a similar technical field, namely that of methods of making decorative surface elements that have structured

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surfaces. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmoock's UV curing lacquer as a layer in Scher's decorative element in order to enable the article to be cured by methods other than convection.

Regarding Claim 32, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using one or more rollers that are pressed towards the surface structured wear layer before the complete curing stage. Schmoock shows that it is known to use one or more rollers that are pressed towards the surface structured wear layer before the complete curing stage (Column 12, lines 4-34). Although Schmoock does not specifically use glazing rollers, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use any configuration of Schmoock's rollers during Scher's molding process in order to obtain a desired final finish of the rolled article (i.e. provide a smooth "glazing" roller instead of one with raised designs).

Claims 26, 28-30, 39, 40-41, 43, and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher and Schmoock, further in view of MacQueen et al. (U.S. Patent 6,399,670).

Regarding Claim 26, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using a specific lacquer. MacQueen shows a process including a method wherein the lacquer consists of an acrylic lacquer (Column 5, lines 29-31; It is noted that "acrylate" is a polymer of acrylic molecules). MacQueen and Scher are combinable because they are concerned with a similar technical field, namely, methods of molding laminates. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's acrylic lacquer in Scher's and Schmoock's molding process in order to produce an article having properties of an acrylic lacquer.

Regarding Claim 28, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not specify using a wear layer with particles. MacQueen shows a process including a method wherein the wear layer includes hard particles with an average particle size in the range of 50nm-150um (Column 8, lines 41-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's particled wear layer in Scher's and Schmooock's molding process in order to produce an article having a wear layer with desired properties.

Regarding Claim 29, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not require the use of particle board. MacQueen shows a process including a method wherein the base layer consists of a particle board (Column 9, lines 22-25). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's particle board in Scher's and Schmooock's molding process to provide a sturdy core layer for the end product.

Regarding Claim 30, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using a base polymer. MacQueen shows a process including a method wherein the base layer consists mainly a polymer (Column 9, lines 22-24; Column 23, line 23). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's base polymer in Scher's and Schmooock's molding process in order to provide the desired base layer properties for the end use article.

Regarding Claim 39, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show using a specific counter stay roller. MacQueen shows a process including a method wherein each structured roller is provided with a counter stay roller between which the surface element is passed (Column 23, lines 34-38). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was

made to use MacQueen's counter stay roller in Scher's and Schmoock's molding process in order to provide accurate control of pressure during the embossing process.

Regarding Claim 40, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show using a specific counter stay roller. MacQueen shows a process including a method wherein each structured roller is provided with a counter stay roller between which the surface element is passed (Column 23, lines 34-38). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's counter stay roller in Scher's and Schmoock's molding process in order to provide accurate control of pressure during the embossing process.

Regarding Claim 41, Scher shows the process as claimed as discussed in the rejection of Claim 1 and 39 above, but he does not give a specific surface element thickness. MacQueen shows a process including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.5mm-1.2mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's thickness guidelines in Scher's and Schmoock's molding process in order to obtain an article that satisfies end-use specifications.

Regarding Claim 43, Scher shows the process as claimed as discussed in the rejection of Claim 1, 32, and 40 above, but he does not give a specific surface element thickness. MacQueen shows a process including a method

wherein the surface element has a thickness T and that the distance between each glazing roller is a specific value (Column 23, lines 47-50; Table 10).

Although he does not specifically disclose that the distance between each glazing roller and the corresponding counter stay is set in the range of T minus 0.7mm-1.2mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's thickness guidelines in Scher's and Schmooock's molding process in order to obtain an article that satisfies end-use specifications.

Regarding Claim 51, Scher shows the process as claimed as discussed in the rejection of Claim 1, 39, and 41 above, but he does not give a specific surface element thickness. MacQueen shows a process including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.7mm-0.9mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's thickness guidelines in Scher's and Schmooock's molding process in order to obtain an article that satisfies end-use specifications.

Regarding Claim 52, Scher shows the process as claimed as discussed in the rejection of Claim 1, 32, and 43 above, but he does not give a specific surface element thickness. MacQueen shows a process including a method wherein the surface element has a thickness T and that the distance between

each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.7mm-0.9mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's thickness guidelines in Scher's and Schmoock's molding process in order to obtain an article that satisfies end-use specifications.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scher and Schmoock, further in view of Correll et al. (U.S. Patent 6,238,750). Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not specifically show applying a wear layer in several steps with intermediate partial curing between said steps by applying a UV or electron beam. Correll et al., hereafter "Correll," show that it is known to carry out a method including applying a wear layer in several steps with intermediate partial curing between said steps by applying a UV or electron beam (Column 6, lines 66-67; Column 7, lines 1-2; Column 8, lines 20-22; Column 8, lines 60-63). Correll and Scher are combinable because they are concerned with a similar technical field, namely, methods of molding multilayer articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Correll's intermediate curing by applying a UV or electron beam during Scher's molding process in order to achieve quick and accurate curing to the desired level each time.

Claims 33-34, 45, 50, and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher and Schmooch, in view of Petry (U.S. Patent 3,196,030).

Regarding Claim 33, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) above 40°C (Column 9, lines 46-48). Petry and Scher are combinable because they are concerned with a similar technical field, namely, methods of making a decorative article. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 34, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) above 30°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 45, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured surface of the mold is heated to a surface temperature (ST) above 40°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the

time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 50, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 30 above, but he does not show using a specific polymer. Petry shows that it is known to carry out a process for making a decorative article wherein the polymer of the base layer is polyurethane (Column 5, lines 3-8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Petry's polymer in Scher's process in order to obtain an article useful in situations that are amenable to polyurethane.

Regarding Claim 56, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 45 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the temperature (ST) is in the range of 50-150°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 57, Scher shows the process as claimed as discussed in the rejection of Claims 1, 32, and 33 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured rollers are heated to a surface temperature (ST) is in the range of 50-150°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Regarding Claim 58, Scher shows the process as claimed as discussed in the rejection of Claims 1, 32, and 34 above, but he does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the rollers are heated to a surface temperature (ST) is in the range of 35-100°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher and Schmooch, in view of Eby et al. (U.S. Patent 5,961,903).

Regarding Claim 35, Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the application of an additional top coat applied to the article. Eby et al., hereafter "Eby," show that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer (Column 8, lines 28-31). Eby and Scher are combinable because they are concerned with a similar technical field, namely, methods which yield articles having a structured decorative surface. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby's top coat during Scher's method in order to provide extra protection for the top wear layer.

Regarding Claim 36, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer after the glazing stage (Column 8, lines 28-31). It would have been prima facie obvious to one of

ordinary skill in the art at the time the invention was made to use Eby's top coat during Scher's method in order to provide extra protection for the top wear layer.

Regarding Claim 37, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 32 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein a thin top coat is applied on top of the structured wear layer before the glazing stage and that the top coat is partially cured before glazing (Column 7, lines 65-67; Column 8, lines 1-4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby's top coat during Scher's method in order to provide extra protection for the top wear layer.

Regarding Claim 38, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 35 above, but he does not show the application of an additional top coat applied to the article. Eby shows that it is known to carry out a method of making an article with a surface structure, wherein the top coat is comprised of acrylic (Column 11, lines 4-5; It is noted that the clause that follows "optionally" has been considered, but as this is an alternative limitation, it is not deemed necessary for the instant invention.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Eby's acrylic top coat during Scher's method in order to provide extra protection for the top wear layer.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scher and Schmoock, in view of Nishimura et al. (U.S. Patent 4,216,251). Scher shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not show the presence of an elastic component in his article. Nishimura et al., hereafter "Nishimura," show that it is known in the

prior art to carry out a method of making an article with a decorative surface, wherein the surface element contains a layer which is elastic at least before the complete curing, the elastic layer being the base layer (Column 1, lines 40-41). Nishimura and Scher are combinable because they are concerned with a similar technical field, namely, methods which yield decorative articles. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Nishimura's elastic component in Scher's process in order for the final product to be used in varying situations which require bending.

Claims 42 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, Schmoock, and MacQueen, in view of Schmid et al. (U.S. Patent 5,804,116).

Regarding Claim 42, Scher shows the process as claimed as discussed in the rejection of Claims 1, 39, and 41 above, but he does not teach a specific pressure which is applied to the article. Schmid et al., hereafter "Schmid," show that it is known to carry out a method of making an article with a surface structure, wherein the pressure between each structured roller and its corresponding counters stay is 50-200 Bar (Column 9, lines 27-29). Schmid and Scher are combinable because they are concerned with a similar technical field, namely, molding processes which yield articles having a designed surface structure. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Regarding Claim 53, Scher shows the process as claimed as discussed in the rejection of Claims 1, 39, 41, and 42 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the

pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, Schmooch, and MacQueen, in view of Greten et al. (U.S. Patent 5,498,309). Scher shows the process as claimed as discussed in the rejection of Claims 1, 32, 40, and 43 above, but he does not show a specific pressure which is applied to the article. Greten et al., hereafter "Greten," show that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 0.1-10 Bar (Column 2, lines 7-8). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Greten's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Claims 46 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, Schmooch and Petry, as applied to claims 1 and 45 above, further in view of Schmid.

Regarding Claim 46, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 45 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 50-200 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Regarding Claim 55, Scher shows the process as claimed as discussed in the rejection of Claims 1, 45, and 46 above, but he does not teach a specific

pressure which is applied to the article. Schimd shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, Schmoock, and MacQueen, in view of James et al. (U.S. Patent 6,354,915).

Regarding Claims 47 and 48, Scher shows the process as claimed as discussed in the rejection of Claims 1 and 28 above, but he does not specify the identity of the hard particles in the wear layer. James et al., hereafter "James," show that it is known to carry out a method of making articles with specific surface structures, wherein (Claim 47) hard particles comprise silicon carbide (Column 3, lines 2-4), and (Claim 48) a part of the hard particles comprise silicon carbide, while another amount of the hard particles consist of diamond (Column 3, lines 2-4). James and Scher are combinable because they are concerned with a similar technical field, namely, molding processes which yield articles recognized for their surface structure. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use James' hard particles in Scher's molding process in order to yield an article useful in situations calling for those specific hard particles.

Regarding Claim 49, Scher shows the process as claimed as discussed in the rejection of Claims 1, 28, and 48 above, including a method wherein the hard particles have an average size range of 50nm-2um (Column 8, lines 41-48). He does not show the use of diamond particles. James shows that it is known to carry out a method of making articles with specific surface structures, wherein the hard particles consist of diamond and are placed close

to the upper surface of the wear layer (Column 3, lines 2-4; Column 5, lines 59-61). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to place James' diamond particles close to the surface of Scher's formed article in order for them to be more visible and/or useful.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, Schmooch, and MacQueen, as applied to claim 43 above, and further in view of Schmid. Scher shows the process as claimed as discussed in the rejection of Claims 1 and 44 above, but he does not teach a specific pressure which is applied to the article. Schmid shows that it is known to carry out a method of making an article with a surface structure, wherein the pressure is 65-100 Bar (Column 9, lines 27-29). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmid's pressure from Scher's rollers in order to produce the desired amount of compression of the article.

Claim 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scher, in view of Schmooch, further in view of MacQueen, Petry, and James. Scher shows that it is known to carry out a method for the manufacture of a decorative surface element, which element comprises a base layer, a décor layer of a lacquer, and a wear layer (Abstract), the process comprising the steps positioning one or more structured rollers or molds on top of the lacquer, the one or more rollers or molds provided with embossing rollers (Column 5, lines 3-13; Column 6, lines 50-64), pressing said one or more rollers or molds into said lacquer, whereby the lacquer will be provided with a surface structure, thereby enhancing the decorative effect of the décor (Column 6, lines 50-64; Column 7, lines 36-68), and thereafter curing the wear layer (Column 10, lines 6-18).

Scher does not show using a UV curable resin in his decorative surface element. Schmooch shows that it is known to carry out a method for making a decorative surface element using a layer of UV curing lacquer (Column 4, lines 11-13). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Schmooch's UV curing lacquer as a layer in Scher's decorative element in order to enable the article to be cured by methods other than convection.

Scher does not show using a specific lacquer. MacQueen shows a process including a method wherein the lacquer consists of an acrylic lacquer (Column 5, lines 29-31; It is noted that "acrylate" is a polymer of acrylic molecules). MacQueen and Scher are combinable because they are concerned with a similar technical field, namely, methods of molding laminates. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's acrylic lacquer in Scher's and Schmooch's molding process in order to produce an article having properties of an acrylic lacquer.

Scher does not specify using a wear layer with particles. MacQueen shows a process including a method wherein the wear layer includes hard particles with an average particle size in the range of 50nm-150um (Column 8, lines 41-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's particled wear layer in Scher's and Schmooch's molding process in order to produce an article having a wear layer with desired properties.

Scher does not require the use of particle board. MacQueen shows a process including a method wherein the base layer consists of a particle board (Column 9, lines 22-25). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's particle board in Scher's and Schmooch's molding process to provide a sturdy core layer for the end product.

Scher does not give a specific surface element thickness. MacQueen shows a process including a method wherein the surface element has a thickness T and that the distance between each structured roller is a specific value (Column 23, lines 47-50; Table 10). Although he does not specifically disclose that the distance between each structured roller and the corresponding counter stay is set in the range of T minus 0.5mm-1.2mm, he suggests that it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to vary the gap between the two rolls in order to obtain a desired thickness of the final article (Column 25, lines 15-21, 31-32). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use MacQueen's thickness guidelines in Scher's and Schmoock's molding process in order to obtain an article that satisfies end-use specifications.

Scher does not show operating the rolls at a specific temperature. Petry shows that it is known to carry out a process for making a decorative article wherein the structured surface of the mold is heated to a surface temperature (ST) above 40°C (Column 9, lines 46-48). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to operate Scher's process at Petry's temperature in order to avoid damaging the molding material due to the rollers being too hot, or prolonging cycle time due to the rollers being too cold.

Scher does not specify the identity of the hard particles in the wear layer. James shows that it is known to carry out a method of making articles with specific surface structures, wherein (Claim 47) hard particles comprise silicon carbide (Column 3, lines 2-4), and (Claim 48) a part of the hard particles comprise silicon carbide, while another amount of the hard particles consist of diamond (Column 3, lines 2-4). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use James'

hard particles in Scher's molding process in order to yield an article useful in situations calling for those specific hard particles.

Response to Arguments

Applicant's arguments filed 23 May 2006 have been fully considered but they are not persuasive.

Applicant contends that Schmooch does not show a wear layer of a UV curing lacquer because his UV curing lacquer layer is not a top layer. This is not persuasive because the claimed "wear layer" is not exclusively required to be a top layer. It is noted that applicant's own wear layer can be covered by a glazing layer (see specification, Page 3).

Applicant contends that Scher does not show using a UV beam to cure the UV curing lacquer. This is not persuasive because Scher was not cited to teach this limitation. See Schmooch for a teaching of using a UV beam to cure a UV curing layer (Column 4, lines 11-13).

Applicant contends that MacQueen does not show using an acrylic lacquer because he teaches using an acrylic resin. According to applicant, "resin" is not the same as "lacquer", i.e. "resin" cannot be a "lacquer". This is not persuasive because the examiner believes that a lacquer (i.e. "varnish") is a type of resin (see Hackh's Chemical Dictionary for terms "lacquer" and "resin").

Regarding Claim 27, applicant's arguments are moot in view of the claim's amended subject matter which presents new grounds for rejection.

Applicant contends that MacQueen does not show using a particle board. This is not persuasive because MacQueen shows using substrates of wood and plastic (Column 9, lines 22-25), which are the ingredients of and make up the claimed particle board. See also Scher, Column 8, lines 5-8, for support in the prior art for using a particle board substrate.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 6:45am-3:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Monica A Huson

August 7, 2006


CHRISTINA JOHNSON
PRIMARY EXAMINER

8/7/06